

[REDACTED]
09/21/2007 04:10 PM To
Jim Dilorenzo/R1/USEPA/US@EPA
cc

[REDACTED] >, [REDACTED]
[REDACTED] >, "Gary Mercer" [REDACTED] >, "'Mark Brazell'"
[REDACTED] >
bcc

Subject
Olin comments

Jim-

Several members of WERC have already emailed their comments, and I will forward an additional message that speaks generally of the group's wishes on more procedural issues going forward, but I'd like to reiterate my personal concerns have over Olin's proposals to cut back on number of monitoring wells/frequency of sampling during the 'interim steps' period. I'll be brief!

First I'm forwarding a letter sent to DEP by a former employee at the Eames Street facility in which he expresses his concern over chromium more or less getting lost in the analyses of other contaminants--NDMA in 2003, but prior to that Olin's consistent reporting of seemingly more innocuous chemicals--chloride, sulfate, sodium, etc. If current/most recent sampling isn't indicating chromium is present at any of 'the site's' sub-sites, what happened to it all? And where did it go??

I'd like the USEPA to incorporate Mr. Myskowski's suggestion of calculating a material balance for chromium. Based on the summary of Drs. Sovocal and Grange in USEPA's November 4, 2004 lab analysis of "Organic Compounds Present in Water Samples from ...MMBA Study Area", I'd also suggest a similar calculation for phenol. Please refer to Page 10:

"The results presented here indicate that the amount of phenol, present as phenol itself, and also converted into halogenated and nitro phenols, must be considerable. If the total amount of phenol originating from the Olin Site can be estimated, it will probably be the only source that could account for the amount contained in the volume of water, at the estimated levels given here, or determined more accurately later."

We can speculate over Olin's current desire to shut down Plant B ASAP, and

they argue in the DIRSWP and elsewhere that the on-going removal of oil isn't garnering as much as it did in past years, but it is particularly worrisome to me that Olin proposes to shut down operation of Plant B for several reasons. First, information provided by Olin and others to DEP in 2002 clearly shows that phenol and varieties of phenol were primary ingredients of many of the products manufactured at the property. It also shows that phenol was stored in tanks, at least one of which was 10,000 gallons capacity with an annual throughput of 281,600 gallons of nonyl phenol and 30,500 gallons of dinonyl phenol. These tanks were likely grouped with the others in the Plant B Tank Farm, which included a 15,000 gallon capacity tank for dioctylphthalate (54,200 gal ann'l), which had no pad or catchment basin, but from which spills flowed directly into the ground. (Olin to DEP, Dec. 18, 2002).



The 1997 Supplemental Phase II Report confirms the presence of ammonia, phthalates, NNDPA, and phenol in the deep groundwater (outside the dense layer) tested in the Plant B Area (page 252). At our meeting in August Steve Morrow was asked specifically if he could describe for folks what the major tank spills were in the Plant B area, and he stated that he didn't really know for sure, but thought the only big leak was processing oil. Given the uncertainties of which tanks of what ingredients were stored where and whether they ever leaked is enough reason in my mind to require Olin to resample the deep groundwater for the contaminants reported in 1997, and that the plant should not be shut down unless and until it is confirmed that NDMA, DOP, Bis, etc. are no longer present.

I'd also like to reiterate my concerns over the slurry wall/containment area and problems with groundwater quality down-gradient of the release window cited in the last status report (May, 2005 covering the July/Dec. 2004 period). Has Olin continued to sample and monitor per the program agreed upon with DEP prior to listing on the NPL? Indications were they pretty much ceased all sampling and remedial work other than Plant B's operation, but perhaps I misunderstood. At any rate, the 6 ml plastic cover lasted less than 2 years, and was replaced by 8 ml plastic, which has now been in place more than 4 years, so I question whether the temporary cap is adequate, and would propose that, if Olin has let the sampling regime lapse for the past 2 + years, they should be required to conduct a comprehensive sampling round now and again within six months to compare dry season/wet season with historical data for a better understanding of if/how well the cap is functioning.

One last thought--since the municipal wells have now been off for 4 1/2

years, how much has the groundwater flow changed? It seems likely to me that the influence of Wilmington's wells since the early 1960's would have the potential to draw Olin's plume to the west/northwest. Now that that influence is gone, is there any movement of the off-site DAPL back towards the property?? I guess this isn't strictly an Interim Steps Work Plan item, although the pumping at Plant B might provide a slight eastward pull, and the DAPL is certainly an issue for the pump-put test.

Thanks for the chance to comment. Please forgive the informality, but you did say quick emails were acceptable.

Martha Stevenson

██████████
Wilmington, MA 01887

-----Original Message-----

From: ed myskowski ██████████
Sent: Sunday, March 16, 2003 10:42 PM
Subject: Chromium
Mar 16, 03

Hello Martha,

Here are some brief comments for the Mar 21 deadline, which you can incorporate into your own comments or simply forward to DEP, whichever you think will be most effective.

Subject: Olin Chemical Site, Wilmington MA

The EPA review documents of Dec. 11, 2002 re Initial Screening Evaluation (ISE) Off-Property West Ditch Study Area, and of Feb. 4,

2003 re Phase III Detailed Evaluation of Remedial Alternatives,
Maple

Meadow Brook Aquifer (MMBA) Study Area are reassuring and I support them in their entirety. I feel qualified to emphasize a few points:

1) The definition of contaminants of concern (COCs) has been made in relation to existing groundwater flows. Little consideration has been given to the effect of remediation methods on the mobility of potential additional COCs from subdivisions of the MMBA.

2) The unpredictability of the surficial and bedrock geology (heterogeneous and anisotropic) is noted repeatedly, particularly with respect to the hazards of predicting contaminant mobility.

3) High transmissivity bedrock fractures are almost certainly prevalent, and thus the vertical extent and mobility of COCs has not been determined. This is especially relevant to the dense aqueous phase layer (DAPL).

The problem of chromium (Cr) in the DAPL is of particular interest

to this writer, because I was involved in the manufacturing operations which discharged Cr through 1967, as well as much later in calculating the amount of Cr discharged. This calculation was reported confidentially in 1996, and eventually incorporated in the Geomega report which is included in the GEI remediation documents, and is now a matter of public record. The total Cr discharged is about three million pounds, although Geomega chooses to indicate this in the form of Cr₂O₃ (incorrectly identified as chromium dioxide) and a total of about four million pounds. These totals are very approximate as I am citing from memory, but the data is readily available to refine the calculated totals.

This calculation could have been made anytime since 1967, and the

results of the calculation have been available since 1996, along with my recommendation that the calculated discharge be compared to the amount of Cr identified at the site (i.e., a material balance on Cr). It appears that this comparison has never been made. Fortunately, there is no evidence that the time lost has yet endangered public water supplies

- there has been no detectable Cr reported in samples from the
Wilmington
wells.

The absence of evidence of Cr in the water supply has been interpreted as evidence of absence, and Cr has been defined as not a COC. This is perhaps a necessary assumption if the option of accounting for the total Cr discharged were not available, but it is. If the total Cr discharged can be found in the DAPL, then the assumption is justified. If not, more thought is necessary as to where it is, or has gone. It is rare to have reliable data on the total amount of a contaminant discharged. Cr at the Olin site provides a unique opportunity to evaluate some of the methods used for sampling and measurement of contaminants, and the models used for mobility prediction.

Other issues have been raised with respect to Cr, particularly the valence state (hexavalent versus trivalent) and Cr solubility (and related mobility). These issues are important and need to be properly evaluated for their impact on public water supply safety. I would submit that they are secondary to a simple accounting for the known amount of Cr discharged.

Ed Myskowski


Salem MA 01970

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